

REMARKS

Claims 1 – 14 are pending in the present application. Claim 3 has been canceled; while Claims 1 – 2 and 4 – 13 have been amended, leaving Claims 1 – 2 and 4 – 14 for consideration upon entry of the present amendment.

Support for the various amendments can be found as listed in the Table below:

Table

Claim No.	Support found in at least
1	Page 6, line 25 – page 7, line 9 of the specification as filed.
2	Correction for minor typographical error.
4	The change from aryl methacrylate to allyl methacrylate is the result of an inadvertent typographical error. As one of ordinary skill in the art would have expected, aryl methacrylates are not crosslinking agents.
5	Claim 1 as originally filed.
6	Claim 1 as originally filed.
7	Page 11, lines 9 – 21.
8	Page 11, lines 9 – 21.
9	Page 11, lines 22 – 25, where it states that the weight average molecular weight of an acrylic copolymer, except for the crosslinked polymer component is in the range of 1,000,000 to 12,000,000.
10	Example 1 for swelling in THF; page 6, line 25 – page 7, line 9 of the specification as filed; page 11, lines 9 – 21.
12	Only corrected inadvertent typographical errors for antecedent basis.
13	Only corrected inadvertent typographical errors for antecedent basis.

With respect to Claim 4, it is submitted that the aryl methacrylate as the crosslinking agent defined in claim 4, is clearly a clerical error for allyl methacrylate, because the crosslinking agent used in the present invention is a free-radically polymerizable monomer with at least two free-radically polymerizable double bonds and aryl methacrylate has only one free-radically polymerizable double bond while allyl methacrylate has two free-radically polymerizable double bonds. The trimethylolpropane triacrylate in claim 1 is also the same kind of mistake for trimethylolpropane triacrylate, because the trimethylolpropane itself has no free-radically polymerizable double bond. No new matter has been introduced by this amendment.

Claims Rejected Under 35 USC §112, second paragraph

Claims 1 – 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. (Office action dated 1-11-08, page 2)

In Claims 1 and 10 (and all claims dependent therefrom), it cannot be determined whether 5 – 15 wt% applies to the crosslinking agent alone, or the crosslinking agent in combination with the alkyl methacrylate monomer, or the alkyl acrylate crosslinked polymer. (Office action dated 1-11-08, page 2)

The acrylic copolymer composition as defined in presently amended Claim 1 comprises an alkyl acrylate crosslinked polymer and a non-crosslinked copolymer is supported by the descriptions of the specification as follows: “An acrylic copolymer prepared from an acrylic copolymer composition including a specific crosslinked polymer and a non-crosslinked polymer in a predetermined ratio according to the present invention improves the foamability of a vinyl chloride resin when added to the vinyl chloride resin.” (PCT Application WO 2005/023882, English Specification, Page 9, Lines 2-7).

The detailed constitutions or components of the crosslinked and non-crosslinked polymers are also supported by the whole descriptions of the specification, and especially by the descriptions and terminologies in the specification as follows: “That is, the acrylic copolymer composition of the present invention includes 5-15 wt% of a crosslinking agent and an alkyl acrylate monomer constituting an alkyl acrylate crosslinked polymer; and 55-90 wt% of methyl methacrylate and 5-40 wt% of at least one selected from the group consisting of an alkyl acrylate compound and an alkyl methacrylate compound constituting a non-crosslinked copolymer.” (PCT Application WO 2005/023882, English Specification page 9, lines 12-19), “the alkyl acrylate compound constituting the alkyl acrylate crosslinked polymer”, “the methyl methacrylate constituting the non-crosslinked polymer”, “the alkyl acrylate compound constituting the non-crosslinked copolymer”.

The fact that the amount of 5-15 % by weight shall be applied to the sum amount of the crosslinked agent and the alkyl acrylate monomer is supported by the descriptions in the specification as follows: “If the content of the crosslinking agent and the alkyl acrylate monomer is less than 5 wt%, a formed product may have an insufficient

expansion ratio. On the other hand, if it exceeds 15 wt%, fine and uniform foamed cells may not be obtained.” (English Specification page 10, lines 10-14) and “Preferably, the crosslinking agent is used in an amount of 0.01 to 0.3 wt%, based on the total weight of all components used in the preparation of the acrylic copolymer.” (English Specification page 13, lines 19-21).

As stated in the specification page 9, lines 12 – 15, the acrylic copolymer composition of the present invention includes 5-15 wt% of a crosslinking agent and an alkyl acrylate monomer constituting an alkyl acrylate crosslinked polymer. Claims 1 and 10 have been amended to state this. Applicants respectfully request a withdrawal of the rejection and an allowance of the claims.

In Claims 1 and 10, the only polymer recited is that resulting in the alkyl acrylate crosslinked polymer. (Office action dated 1-11-08, page 2)

Claim 1 is currently amended state “an alkyl acrylate crosslinked polymer formed by the polymerization of 5-15 wt% of a crosslinking agent and an alkyl acrylate monomer; and a non-crosslinked copolymer formed by the polymerization of 55-90 wt% of methyl methacrylate with 5-40 wt% of at least one monomer selected from the group consisting of alkyl acrylate compounds and alkyl methacrylate compounds, wherein the weights are based on the whole weight of the crosslinking agent and the monomer components.”

Claim 1 is therefore now directed to a non-crosslinked polymer and a cross-linked copolymer.

Similarly Claim 10 is now amended to be directed to an acrylic composition that comprises an alkyl acrylate crosslinked polymer and a non-crosslinked copolymer. Applicants respectfully request a withdrawal of the rejection and an allowance of the claims.

In Claim 1, the intended weight percent of the alkyl acrylate is indefinite because the alkyl acrylate of (A) is the same as that of (C). (Office action dated 1-11-08, page 2)

The amendment to Claim 1, which is listed above, is now directed to an alkyl acrylate crosslinked polymer that comprises an alkyl acrylate monomer and a non-crosslinked copolymer that comprises a monomer selected from the group consisting of alkyl acrylate compounds and alkyl methacrylate compounds. The weight percents of these alkyl acrylates may overlap, but

they are used for making different compounds respectively. The amendment to Claim 1 thus renders this rejection moot.

In Claim 1, the intended weight percent of the alkyl methacrylate is indefinite because the methyl methacrylate of (B) could also be the alkyl methacrylate of (C). (Office action dated 1-11-08, page 3)

As detailed above, the amendment to Claim 1 thus renders this rejection moot.

It is believed that the foregoing remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this response or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Assignee.

Respectfully submitted,

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